

What is Claimed Is:

1. A method comprising:
receiving a data frame by an integrated network switch; and
prioritizing switching of the data frame by the integrated network switch to an output port according to a user-defined policy and based on a user-selected attribute of the data frame.
2. The method of claim 1, wherein the integrated network switch includes a switching module configured for identifying a presence of an output port for each data frame based on at least one of a media access control (MAC) source address and a (MAC) destination address, the method further comprising configuring by a host processor, coupled to the network switch, the switching module to switch the data frame according to the user-defined policy based on the corresponding user-selected attribute.
3. The method of claim 2, wherein the step of configuring the switching module includes setting the user-selected attribute to a prescribed network switch port.
4. The method of claim 3, wherein the prioritizing step includes switching the received data frame according to the user-defined policy based on the data frame having been received on the prescribed network switch port.
5. The method of claim 2, wherein the step of configuring the switching module includes setting the user-selected attribute to at least one of a prescribed source address and a prescribed destination address.
6. The method of claim 5, wherein the setting step includes setting the user selected attribute to at least one of a prescribed MAC address and a prescribed Internet Protocol (IP) address.
7. The method of claim 6, wherein the prioritizing step includes switching the received data frame according to the user-defined policy based on the data frame having the at least one prescribed address.

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detecting the user-selected attribute within the data frame by one of the network switch ports having received the data frame; and

5 notifying by the one network switch port the detected presence of the user-selected attribute to the switching module, the switching module in response switching the data frame according to the user-defined policy.

9. The method of claim 8, further comprising configuring, by the host processor, the one network switch port for detection of the user-selected attribute.

10. The method of claim 9, wherein the step of configuring the one network switch port includes configuring the one network switch port for detection of a prescribed data flow.

11. The method of claim 1, wherein the step of switching the data frame includes switching the data frame independent of priority information within the data frame.

12. A network switching system comprising:
an integrated network switch including:

(1) a plurality of network switch ports, each network switch port including a port filter configured for determining a presence of a user-selected attribute in a received layer 2 type data frame and outputting a signal indicating the determined presence of the user-selected attribute for generation of a switching decision, and

(2) a switching module configured for generating the switching decision for the layer 2 type data frame based on the determined presence of the corresponding user-selected attribute and based on a corresponding user-defined switching policy; and

10 a host processor configured for programming the port filter with the user-selected attribute and the switching module with the corresponding user-defined switching policy.

13. The system of claim 12, wherein the port filter is configured for determining the presence of the user-selected attribute independent of a presence of a priority tag within the received layer 2 type data frame.

15. The system of claim 12, wherein the integrated network switch further includes for each network switch port at least two output queues having respective priorities, the switching module identifying a selected one of the output queues for outputting the layer 2 type data frame based on the user-defined switching policy.

17. The system of claim 12, wherein the switching module includes priority registers, each priority register configured for mapping the received layer 2 type data frame of a corresponding network switch port to a switch priority value based on the user-defined switching policy, the switching module generating the switching decision for the layer 2 type data frame in accordance with the switch priority value.